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The Integration of Mental Hygiene Concepts and Practices in a Public Health Program

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IT is usual when the subject of mental hygiene is discussed to think of the psychiatric clinic as the facility for carrying out any and all programs in that field. Today, I shall discuss some concepts and practices in the field of mental hygiene which should be an integral part of our thinking and practice in public health work but which do not necessarily require the establishment of a psychiatric clinic. For the sake of illustration and discussion, I shall present this aspect of a total psychiatric program as the field of mental hygiene and refer to the psychiatric clinic as falling within the province of the specialty, psychiatry. That this in reality is a false dichotomy will readily enough become apparent as I proceed.

Most public health work is carried on by health officers—medical men, nurses, and sanitary engineers. As a health department grows, ancillary personnel from many fields may be added to aid in better carrying out its basic functions. It is through that personnel which is primarily engaged in the human relations work of the public health program that activity in the field of mental hygiene becomes effective. Let us then turn our attention to some of these areas of the public health program in which we come in contact with people.

Pregnancy, for most women, is of major emotional significance. For most of them, too, it is a time of mixed emotional upheaval. Even those who had joyfully looked forward to their pregnancy are not free of mixed emotions. These, too, have heard tales of nausea and vomiting, of increasing discomfort with the months of pregnancy, of the agonizing pain just before and at delivery, of never being the same again after childbirth; yes, and of

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the probability of death of either mother or child, or both. But many women, from the moment they are conscious of their pregnant state, are angry and resentful as well as anxious and fearful; in general, they are emotionally distraught. There is little feeling of fulfillment, of happiness in the creative task, in such women. Among them one can find those who were brought up to look upon all sex activity as sinful. Others cannot accept the pregnancy because of its deeper emotional significance in terms of childhood attachments to father or brother. Still others cannot accept it because their childhood rearing causes them to strongly resent the, for them, implied feeling of inferiority to man, to any male whomsoever. Then there are those in whom pregnancy greatly increases their insecurity and may even arouse feelings of despair. A few may have become pregnant deliberately, hoping that a child will be the bond that will cement a marriage relationship already badly broken. These are some of the emotional states in pregnant women who come to the prenatal clinic. Here are two human beings, the mother and her unborn child, and in addition others, such as husband, children, and relatives, whose mental health can be furthered or possibly made worse by what is now done for the pregnant woman.

And yet the average pregnant woman receives scarcely any care directed toward her emotional state. She is examined for the presence or absence of physical disease, measured in order to determine the size and nature of the birth canal, and, when the rest of the examination is negative on physical examination and laboratory tests, dismissed with possibly a few matter-of-fact statements about diet, exercise, and rest. Not one question may be asked about her emotional reaction to her pregnancy. On her return, in addition to the routine blood-pressure and urine tests, she may receive advice about the layette and the articles needed for either home or hospital delivery. Some time may be given to group discussion; but, in general, it will be brief and superficial. Often it creates more problems for the disturbed woman than it solves and, therefore, leaves her in a worse emotional state. Then it is wondered why this woman aborted or that one didn't return to the clinic!

It is true there is still much to be learned about the effect of the emotional state of the pregnant woman upon the child. However, enough is now known to prove that both physical and mental characteristics of the child depend to some degree upon experiences in the prenatal period. It is also known that such symptoms as nausea and vomiting, bleeding, and even spontaneous abortion may be caused by the emotional state of the woman. Even more definite is the knowledge that the emotional state of the pregnant woman influences her attitudes to the child. Many a child was rejected before his birth and continued to be because the mother could not accept her pregnancy. So, also, a child may be the favorite one of several children because of the happy, contented state the mother experienced in that particular pregnancy. It is known that the pregnant woman's attitude toward herself may greatly affect a disease from which she may be suffering. If death is preferred by her to the pregnancy, a minimal tuberculous lesion, for example, may rapidly spread. On the other hand, in the case of the woman who found joy and contentment in her marriage and who is eagerly looking forward to this

fulfillment of herself as a mother, a somewhat advanced tuberculous state may heal more rapidly than had been anticipated even had there been no pregnancy.

Both the doctor and the nurse, if they be aware of these many anxieties, fears, and worries of the pregnant woman, can do much for her. They, first of all, can permit her to discuss her fears, accept them, and not belittle her by a scornful dismissal of them as nonsensical and inane. Under modern rearing and education, most women lack sound knowledge concerning reproduction and childbirth. Therefore, a calm, objective statement of fact and reassurance will be of real value to the pregnant woman otherwise not emotionally burdened.

In caring for the woman whose emotional problems are more deep-seated, good rapport is the first essential. Here, the acceptance of the patient as a person is the starting point. There is no need to probe; in fact, that often is dangerous in unskilled hands. As the story in good history-taking unfolds, one must be willing to accept the hostility which may be projected upon the physician or the nurse. This acceptance is extremely important; for to react with hostility expressed as resentment, shown through facial expression or in words, is to drive the patient away. It is important to abstain by look or word from disapproval of the patient's thoughts or actions. The more resentful the woman feels, the more thoughts she undoubtedly has about not wanting the child, and consequently the more feeling of guilt she has. Permitting her to talk about these thoughts and feelings in a non-judgmental atmosphere tends to free her from her sense of guilt in that she feels understood and not condemned. The reduction of anxiety and resentment thus achieved will make for a more uneventful pregnancy, an easier and calmer labor and, even more important, a more wholesome acceptance of the baby, expressed, for example, in a desire to breast-feed the child.

The well-baby conference offers unexcelled opportunity for sound mental hygiene activity. In order for the child to have a sound mind in a sound body, he needs more than just food, warmth, and cleanliness. He needs to be brought up in an emotional atmosphere of acceptance and in a household in which harmony and confidence reign. Poor feeding practices and inadequate toilet training, to choose but two examples, in an atmosphere of love and security are not nearly so harmful to the child as such practices and procedures carried out in an atmosphere of resentment and rejection. Emotions are contagious. Fear, anger, disgust, any strong emotion, exhibited toward the child engenders feelings of anxiety and insecurity. Just as a child, when it is loved, accepts the parents' evaluation of it as one that amounts to something, so also a child, when it is rejected, accepts the evaluation that it amounts to nothing.

The loved child grows up secure and self-confident; the rejected child grows up feeling lonely, unwanted, and misunderstood, no matter how good a front he may show to the casual observer. Such children are never emotionally well. Some stimulus at a later date may have value enough to bring the repressed emotional state into action which may express itself, for example, in a complete withdrawal from all social demands, or as open

rebellion showing itself in delinquency, or in neurotic, psychotic or psychosomatic disorders.

In view of such knowledge, would it not be wise to deal with the causative factors of the emotional maladjustment at the earliest possible moment? Yet all too frequently the well-baby conference is a hurried affair of height-weight measurement and immunization. The mother's questions are impatiently answered. Rarely is sufficient attention given to the questioner to note that behind the question lurk anxiety and fear, resentment and hostility. The anxiety and fear may result from the mother's uncertainty as to what and how to do for the child because of her ignorance of child growth and development. Conflicts in culture between husband and wife or parent and in-law are common causes of discord in child-rearing. The mother may have observed traits which she herself has or which she sees in her husband and about which she has strong feeling. It is possible, too, that she has observed developmental signs which point to mental abnormality, such as mongolism, cretinism, or mental retardation due to other causes. Or she may be misinterpreting certain quite normal features as defects. On the other hand, she may be filled with resentment because she is burdened with the care of the child and neglected by her husband. Her own emotional immaturity may be blocking and thwarting her in caring adequately for the child, which, in turn, reacts to its unfulfilled needs by emotional outbursts and inability to accept training at her hands.

It is the failure to deal with these problems constructively at the earliest possible moment which causes the commonly heard cry, when the damage done can be recognized by the merest tyro, "We must have a psychiatric clinic to care for all these disturbed children and their parents." Good history-taking, which means good interviewing techniques, sound knowledge of normal growth and development, and an appreciation of how personality arises out of the socio-emotional experiences of living, together with a full recognition of one's own role as physician or nurse in human relationships, are the major requirements in carrying out a mental hygiene program. These are things, however, which without too great an effort can become part of the armamentarium of the average public health worker.

The doctor and the nurse will meet with these problems of social and emotional maladjustment in their work in day-care centers, nursery schools, and in schools from kindergarten through college and university. Now, in increasing numbers, they will see them expressed in delinquent behavior and in neurotic, psychotic and psychosomatic disorders. Blocked, coerced, frustrated, deprived—in one way or another these emotionally sick individuals have failed to receive the understanding, affection, and security so necessary to normal personality and character development. Not only is it necessary to understand the behavior exhibited, but it must be correctly interpreted to all those adults who have immediate contact with the sick individual and also to those individuals whose actions directly affect the parents who, in turn, will communicate their reactions to their children.

Today, public health workers are actively at work in the study and treatment of venereal disease, tuberculosis, rheumatism, etc. Progress has been

made in all these fields, but much more could be made if the socio-psychological aspects were more adequately dealt with. The increase in the venereal disease rate in young people cannot be understood apart from the changed position of woman in our culture. Woman since the turn of the century has won intellectual, political, economic, sexual, and maternal freedom. But she has won these freedoms at terrific expense to her happiness. She is confused, frustrated, and thwarted in her personality development and, as a result, feels uprooted, disoriented, and aimless. Depression and wars have contributed to her unhappy lot. For the first time in cultural history, no wife and mother has any reasonable sense of security in that status. Divorces are on the increase, be there children or not. In such a cultural setting, it is hardly to be assumed that woman can accept a passive, feminine sex role. Rather, she uses sexual activity as a means of expressing her revolt against the restrictions and demands of parents and society, and as an outlet for herself through which she aims to obtain that prestige otherwise denied her. In her sex activity she is the active man and through it attempts to overcome her feelings of inferiority and difference. Her sensuality expressed in sex activity does not imply a tender feeling for her partner, but often only contemptuous feeling or no feeling other than a desire to obtain quick, easy gratification for an emotional hurt.

But the changing lot of woman has not let man go unscathed. The adolescent boy is keenly aware that he must expect competition from women. Jobs that once he could have claimed as his, he now must share with women. The warfare between the sexes is much more devastating than many wish to recognize.

Many other causes of conflict produce feelings of inferiority and a lack of self-confidence. Experience tends to show that the individual who reacts with a pathological desire to succeed, yet with a tendency to irresponsibility, indulges in practices flattering to his self-esteem, such as irregular sex activity.

The venereal disease problem is but a part of the total sex problem which expresses itself in many different ways, such as in sexual aberrations—exhibitionism, fetishism, homosexuality—or in frigidity, impotence, etc.

A careful study of his patients as persons will soon show the V.D. control officer that the emotional factors are of considerable importance. His own attitude toward sex and the sex offender is worthy of his study, and probably to his surprise he will find that his attitudes in many cases are the reason for his poor "contacts" record or even for the patients' non-return for treatment. On the other hand, he will find that a sympathetic, understanding attitude will relieve many of his patients of their unconscious guilt feelings and their need for punishment of themselves, or their feeling of resentment and their need to punish others through the spreading of their infection.

Since evidence shows that the sex pattern is quite well established by the time adolescence is reached, the V.D. control officer will want to do all in his power to aid in the establishment of sex education as a part of all education in the schools and colleges. He will interest himself in family relations courses, family and marriage counseling centers, and in all projects dealing with the relationships between the sexes.

Sir William Osler once said that the fate of the tuberculous depended

more on what they had in their heads than on what they had in their chests. It is indeed well known that there are many socio-emotional problems incident to the disease. Even the most stable individual will find the diagnosis markedly anxiety-arousing. Many patients appear shocked when told the diagnosis and cannot take in what is being said to them. Hence, they cannot at once adjust themselves to do what has been suggested in the way of care and treatment. They need help to enable them to handle their anxiety to constructive ends. One way to be of immediate help is to make them feel understood, to appreciate what it means to them to have the disease. In many instances, there will be financial worries and worries over what the illness may mean to members of the family. In some communities a tuberculous patient is feared, and he loses status in the eyes of his fellow-men. Young adults may see their disease in terms of a thwarting of their career. In the more poorly adjusted, and there seems to be a high incidence of neurosis among those who contract tuberculosis, not only will there be all of the above-mentioned anxiety-arousing factors operating, but the individual will react according to his neurotic defence pattern. If, as so often is the case, he is a dependent personality with a strong need for love and protection, he may think only in terms of what his illness will mean to the one upon whom he is emotionally dependent. If, for example, he had adjusted himself by physically working hard on the job in order to hold the love of his partner in marriage, he may refuse to give up work and go to the hospital for fear that he will then lose that love. If he has always been openly dependent, he may react by expecting to be looked after without his cooperating in the treatment. These are the patients who say to their doctor, "Well, doctor, it's up to you." He who cannot face his dependency may, on the other hand, remark that now it is up to him and refuse treatment since, as a defence against his dependency feelings, he insists it is *his* battle to fight. The individual who has never had his dependency needs met may react with despondency and turn to liquor or even suicide. In other cases, the reaction may be one of resentment and refusal to cooperate in any way whatsoever.

Here, too, let us not forget to consider our own reactions to such people and their life problems. Sometimes our fear of the disease motivates us to reject the individual if he hesitates in immediately placing himself under care and rigidly following all our instructions for protecting others (us) from the disease. We brand him uncooperative and reject him, or insist that he is a menace to society and use police powers to put him into a hospital.

There are many other problems of a socio-emotional nature which time does not permit us to discuss. Suffice it to say that only if we understand the meaning of the patient's and our behavior can we adequately treat his disease.

There are, of course, many other types of clinics and activities in and through which we in public health work come into contact with people. I have used the above illustrations only to show some of the many socio-emotional problems always encountered in dealing with people. I have also indicated a few of the ways in which one can be more helpful. In many schools of public health nursing and in most medical schools today, these principles are taught and practised so that the younger members of our

professions can at once put them into effect in their work. However, there is a real need for in-service training. This can be carried out in several different ways. Each health unit, for example, might send one of its nurses, carefully chosen both in terms of personality and interest, to a good school for a year's training in mental hygiene in nursing practice. Then, on her return to the staff, she could act as a consultant to the staff as well as an instructor in the in-service training program. In large health units this is practical. In small units such consultation and in-service training could well be provided as a service from the Provincial or State Department of Health. It probably would be best to have such a consultant carry on her work under the administrative direction of the person in charge of local health services. In view of the immediate scarcity of such qualified nurses to undertake this work, a well-qualified psychiatric social worker or clinical psychologist might be employed. A closer cooperation with social agencies and schools in meeting the social and educational needs of many patients could in this way be achieved. A psychiatrist on the staff of every large local health unit and of the Provincial or State Health Department is highly desirable, provided he can see as his major task teaching, training, and consulting, and not, as so often happens, the setting up of a special clinic to which all "problem cases" are referred for treatment and disposition. The psychiatrist ought to have the opportunity to work in the several clinics with the regular personnel, to bring out the social-emotional factors and to assist the staff in obtaining a better understanding of their own motives and attitudes as well as those of the patients.

There is need in every community for a well-organized psychiatric clinic. Such a clinic should serve the entire community, not just one or another segment, at least not until the community meets its basic psychiatric needs. Then, specialized psychiatric clinics can be with profit established. In general, the unit staff of a psychiatric clinic is made up of a psychiatrist—preferably one with training in child psychiatry—a clinical psychologist, two or more social workers, and the requisite clerical help. A nurse with training in mental hygiene can be a valuable addition to the staff.

The clinic should accept some cases not too seriously disturbed for the purpose of study and consultation with the referring agency, and thus aid the agency worker in seeing more clearly his role in the treatment process. Many cases, if handled skillfully in this way, would not need to be carried in treatment by the psychiatric clinic staff. As time went on, the basic personnel in health, welfare, and educational agencies would become increasingly more skillful in dealing with those situational factors causative of emotional disturbances. It is not suggested that the basic personnel would replace psychiatrists or the psychiatric clinic. It is believed, however, that through such procedure their skills in their particular tasks would be improved to the point that both they and the patient would benefit; the professional personnel through clearer insight into the meaning of behavior, their own as well as that of the patient, and the patient through more comprehensive care. Such a program should aid in preventing maladjustments and in restoring many people to health—health as defined by the World Health Organization as "a state of complete physical, mental, and social well being, not merely the absence of disease or infirmity."

The Development of the School Health Curriculum

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BEFORE beginning our discussion of the school health curriculum it may be well for us to spend a few moments orienting this discussion in terms of the basic purposes of education.

Education for a prescribed number of years is mandatory for practically all children in the United States and Canada. This is our way of making sure that the elements of communication are known, that the individual has some knowledge and understanding of his environment, and that the individual becomes aware in ever increasing degrees that he is a member of a larger community with certain rights and privileges as well as certain definite responsibilities. Our freedom and democracy are dependent upon the interest and understanding shown by each individual in the governmental affairs of his town, county, state or province, and country. Without such involvement in the affairs of our community we permit the rights and privileges of a democracy to slip through our fingers. Society has taken compulsory education as the means of perpetuating our ideas of democracy. It has also taken this means of educating our children for the responsibilities which they must assume on reaching their majority.

Our purposes in education, then, are far more than the transmission of accumulated knowledge. Our purpose is to develop citizens who have learned how to work together for the improvement of the common weal. Our purpose is to provide those experiences for our children which will enable them to make choices based on judgments arrived at after the facts in the case have been appraised. Our purpose is to develop citizens who have learned to respect the individual worth of others. Education is the process through which the individual learns to make judgments which affect his behavior.

Health education may be defined as the process through which an individual (or group) learns how to make decisions which enable him to achieve and maintain a degree of health commensurate with his potentialities for healthful living.

Our school health curriculum, then, must help the child to understand his health needs and those of his community. It must also help the child to gain an understanding and appreciation of what he must do to meet these needs. The school health curriculum must also instill the desire within the child for

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achieving and maintaining a reasonable level of health. We know what the individual should do if he is to achieve and maintain a reasonable level of health. However, these practices can be performed only by the individual himself. He cannot relegate them to someone else. The individual's full capacity for achieving and maintaining a reasonable level of health is dependent upon his ability to live by these suggested practices.

Moreover, since the individual is an integral part of a larger community, he must know something about the community services which provide him with safe water, proper sewage disposal, safe food supply, adequate protection against communicable disease, safe sanitary environment, facilities for hospitalization and medical care, to mention but a few of the more common essential community services. It is the individual's responsibility to join with others in his community to see to it that the essential services for the protection and promotion of the public health are provided.

Those are the goals toward which we must strive if our school health curriculum is to have meaning and purpose.

How can we develop a school health curriculum to meet the above-mentioned objective?

Before discussing some of the methods which can be used to develop a positive school health curriculum, let us see whether we can describe the environment in which success is most likely to take place.

First, the educational philosophy of the superintendent of schools, the principals, supervisors and teachers is such that the child and his needs are the focus of the educational program. Too often we find that the child and his needs are of secondary importance, since the administrators and teachers are more concerned with subject matter, or the teacher is the focus of the program.

Second, the philosophy of administration and personnel practices within the school system and within each individual school exemplifies democratic practice.

Third, practice within each school is such that the students are given responsibility for self-government.

Fourth, the principal and teachers give active support to a strong parent-teacher organization.

Fifth, there is a oneness between school and community.

Sixth, there is a planned program of in-service training for school administrators and teachers.

There are other criteria which could be added to this short list. However, if these six conditions are met, it is my feeling that a school health curriculum can be developed in such an environment.

Several methods can be suggested for developing the school health curriculum. The one that appeals to me most is the formation of a school health council. "Suggested School Health Policies" contains a good description of school health council organization. All personnel within the school in any way concerned with the school health program should have representation on the council, including students, parents and community agencies providing services for school-age children. In a recent study of school health

councils, it was found that the administrative head of the school served as chairman in practically all instances.

School health councils organized in an environment which meets the six specifications set forth earlier should be able to develop a productive school health curriculum. Vertical committees representing all interests in the school can be organized within the council to develop suggested courses of study for different grade levels; suggestions for integration, visual aids, pupil health guidance, sanitation of the school plant, lighting, ventilation, accident prevention, community health projects, etc.

School health councils provide a means by which those concerned with the educational program may develop a school health curriculum based on the interests and needs of the children, through which the children will gain experience in living healthfully.

The important elements of the curriculum are the teacher, pupils, and administrators. Activities must be considered which will enable the teacher to become more aware of the health needs of children and how they may best work with the children to meet these needs.

It is possible through a variety of activities to increase teacher awareness of pupil health problems. In my own experience I have seen teachers gain increased understanding of their pupils by having them make a study of one child in their class who has presented problems. By discussing these children with a person skilled in child guidance the teachers were able to see relationships between cause and effect which they had missed previously. When such case studies are used with teacher groups, the teachers are more inclined to strive for understanding since the children under discussion are known to them and are real persons. The psychologist or psychiatrist who works with the teachers in such instances finds the teacher receptive to suggestion and willing to put into practice their newly found understanding.

Projects with children can also serve to increase understanding of teachers for the needs of their pupils. A twenty-four hour a day diary kept by the children for a week, including the weekend, can be most revealing to an alert teacher.

One could go on enumerating examples of activities which could serve to increase teacher awareness of children as individuals, each with his own particular health needs. Suffice to say that the effective school health curriculum is one which enables the teacher to consider the individual health needs of her pupils and helps her in developing a program with the pupils which meets these health needs.

Now to return to the structure of the school health council, particularly its leadership. As I mentioned before, we found on inquiry that in the great majority of cases the administrative head served as chairman.

This seems like good procedure since the administrator is the key to the success of the school health council. He must be a person of broad vision who has a desire to make the educational experience of the child one which is related to his needs and in terms of meaning to the child. He must have a philosophy of administration which makes it possible for the teachers and others to share with him in making decisions regarding school policy and

objectives. Not only must he be willing to provide leadership for his school health program, but he must see that the walls of the classroom and the school encompass the entire community. If the administrator is all this, then the school health council will function as it should to the best interests of the children and the community.

From the replies to the survey we conducted it was evident that the number of times the school health councils meet each year varied. In some instances they meet once a month; in others three or four times a year. The general impression, however, is that work of the councils is continuous, with set meetings for discussion and continued exploration and planning. I would like to read all the replies, since I know you would be interested in them. This, of course, would not be practical, so I have selected two replies which will give you an idea of the problems considered by the councils and some of the thinking which the school administrators who answered have done on the subject.

1.

"Our council meets about four times a year. I believe we should meet more often. To date we have no definite affiliation with a city-wide community health council because there is none in existence. However, some of us feel that there should be and we hope to do something about it.

"Our philosophy is that the school health program is but one phase of the total community health problem, but a very important phase. We should endeavor at all times to cooperate with every health agency in our city. This we strive to do.

"Following are some of the problems we have been working on recently:

1. More thorough physical examinations.
2. Longer lunch periods.
3. Longer school day.
4. The problem of personal cleanliness. (Many children seldom take baths.)
5. Providing custodial care.
6. Coordinating health instruction in the high school.
7. Less textbook health instruction and more projects and activities.

"As a result of our deliberations last year we now offer a regular health course to all high school freshmen. We have been gradually making progress. Although we don't qualify for any blue ribbons at present, I am sure we are moving in the right direction. There is no question but what our Health Council has made our health program much more effective. I am quite enthusiastic about it and I am glad to recommend it to others."

2.

"The Council has met monthly and discussed the immediate health needs of the children and formulated plans for future activities to improve our health program and facilities. Some of the problems discussed so far, have been the following: school lunch program, the rest period for the primary children, the school safety program, school patrols, the nurse's and dental hygienist's activities, the eye-testing program, proposals for an eye clinic, vaccination certificates, health record cards and the follow-up program. Another activity of the Council has been the issuing of a quarterly bulletin to the parents of the children, the purpose of which is to explain our health regulations and activities in order to gain their cooperation."

"I feel that the activities of this Health Council are highly beneficial both from the point of view of improving the health facilities and programs for the children, and from the point of view of stimulating professional growth of teachers, and those concerned with child health

and well-being and in creating an awareness of situations which need attention. We recognize the fact that our activities are somewhat inadequate but that we will continue to grow and improve with each meeting. We have had on several occasions authorities in the field address our group and it's our intention to have additional guests attend. It is hoped that following the example of this Council other schools in the city will initiate similar ones to meet their individual needs."

Whether these school health councils will continue to grow and develop into integral parts of the administrative structure of their respective schools only time will tell. We do know, though, that without such councils the school health program will remain a sterile activity which means little to the children and oftentimes less to the administrator and the community.

The Development of a Health Unit, with Special Reference to Field Studies

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CERTAIN of the schools of public health in the United States of America have developed areas for field training and study purposes as part of their facilities for instruction and observation of administrative practice. It is the opinion that an institution offering instruction in public health benefits materially by the addition of facilities available in such a demonstration area or health unit.

A school of public health, with its various departments, needs an area where the population is receptive and where the Board of Health has an appreciation of the value of surveys and other studies, including administrative practice, in improving the local health services.

In 1940 the School of Hygiene, University of Toronto, had the opportunity of assisting the municipality of East York in developing a public health program.

The first objective was the establishing of an effective local program with adequate staff, and the second objective the relating of the work to the School of Hygiene. In regard to the first, it was realized that there should be developed a close relationship with the medical profession and the hospital authorities. In regard to the second, the desires were to provide a demonstration centre, in so far as the work warranted; a field training area for post-graduate students in public health desiring special work; and the conduct of studies by the various departments of the School of Hygiene directed toward improvements in administrative practice.

The Township of East York, a suburb of Toronto, was chosen as the location for the area. The population in 1940 was just under 40,000 and the area about six square miles. This municipality is located about two miles east of the University grounds and is accessible by public transportation.

A proposal was made to the township council and an agreement was reached resulting in a co-operative effort with the School of Hygiene. The services of the medical officer of health and the supervisor of nursing were to be provided by the University, together with the expenses incident to the conduct of studies. The municipal council agreed to provide for an adequate public health program.

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The development during the war years was handicapped by the difficulty in obtaining and maintaining continuous service of staff members. However, some progress was made and this progress has been gratifying since 1945.

Early in 1947 the Town of Leaside joined with the Township of East York to form the East York-Leaside Health Unit. Such a health unit qualifies, under the Public Health Act of Ontario, for substantial assistance from the Provincial Department of Health. This union provided a larger area, more diverse industries and, of course, additional population, which now numbers about 65,000.

For the year 1948 the staff consisted of two full-time medical officers of health, a supervisor of nursing and twelve public health nurses, two sanitary inspectors, and four clerks. There are two dentists giving five half-day's service each a week, as well as two full-time dental nurses. The Victorian Order of Nurses provide a community service employing a supervisor and five nurses. The part-time service of ten physicians provides for the work in the various clinics.

There are eleven elementary schools, two secondary schools, two separate schools and one private school, with a total enrolment of approximately 10,000 pupils. The budget for 1948 provides \$1.22 per caput.

The Health Unit is fortunate to have within its boundaries one of the leading hospitals in the metropolitan area. It is expected that this hospital of over 300 beds will be affiliated with the University for teaching purposes.

Physicians serving the East York-Leaside area are largely resident in the City of Toronto. Many of these physicians are members of the Toronto East Medical Association.

There is splendid cooperation between this local medical society and the officers of the Health Unit. This was evidenced in the development of a plan with the Toronto East General Hospital to supplement facilities for tonsillectomies, which were already provided without charge to the patient for those unable to pay, by arranging for the conduct of tonsillectomies for a group of the population who were not indigent and desired to make some payment for the services rendered. These discussions revealed a common desire of the practising physicians and the health department to develop plans in which the interests of the physicians were safeguarded and those receiving the service were encouraged to meet, as far as possible, their obligations.

In relation to this health unit the teaching staff of the School of Hygiene becomes, as it were, a board of consultants. These specialists are of great value to the Health Unit as they assist in planning the over-all program as well as suggesting and directing special studies which relate to their particular departments within the School.

This relationship has its advantages to the School of Hygiene. An opportunity is provided to conduct special studies applicable to field observations, and the heads of the various departments are able to determine the value of administrative procedures as well as to conduct investigations of a research nature. The information gained is of value to the municipalities and to public health in Canada. The results of studies have been published in several articles.

The relationship between the Health Unit and the School of Hygiene is a close one. The director and medical officer of health of the Unit is Associate Professor of Public Health Administration. The Director of the School of Hygiene, Dr. R. D. Defries, is also professor and head of this department, and his valued direction and advice are always available. The supervisor of nursing also has had an appointment in the Department of Public Health Administration in the School of Hygiene. This results in a close liaison with the Health Unit for administrative purposes.

One of the first studies was conducted by the Department of Nutrition and was carried out in the secondary school in East York. This study related to the adequacy of vitamin intake. The work was done by specially trained members of the Department of Nutrition under the direction of Dr. E. W. McHenry with the cooperation of the Health Unit staff.

Another of the earlier studies was conducted in cooperation with the Connaught Medical Research Laboratories under the direction of Dr. Nelles Silverthorne and related to the use of a combined antigen of diphtheria toxoid and pertussis vaccine.

From July, 1946, to April, 1947, a mental hygiene study was made of about 300 pupils of all grades in one of the smaller elementary schools. This study was made possible through the Department of Hygiene and Preventive Medicine under Dr. D. T. Fraser. The work was conducted by Dr. J. M. Parker, then a Hastings Memorial Fellow and now assistant medical officer of health in the Unit. As the Health Unit staff were closely allied in this work, it has been possible to offer assistance to parents where problems presented.

At the present time there is going forward in one school area a rather unusual study in that it involves three departments in the School of Hygiene. The purpose of the study is to observe the development of the children in this particular school for a period of five years. The Department of Nutrition has provided the services of a physician and a trained nutritionist to conduct physical examinations and obtain information relative to dietary habits. A dental examination is made by the Health Unit staff dentist. The Department of Physiological Hygiene provided the services of persons trained in the use of special equipment to test vision and hearing.

Dr. D. Y. Solandt, head of the Department of Physiological Hygiene, utilized this school for the purpose of an important investigation of lighting conditions designed to determine the value of newest types of equipment. Five classrooms were illuminated, using three different methods. Through the co-operation of the Ontario Hydro Commission and the Board of Education in East York, this most interesting study has been forwarded.

Dr. N. E. McKinnon, head of the Department of Epidemiology and Biometrics, is giving direction to a study of methods by which essential data relating to morbidity in a community may be obtained.

The Department of Public Health Administration in the School of Hygiene is interested in problems of health education in the East York-Leaside Health Unit, which are somewhat different from those of an urban population of similar size. Being suburban areas of the City of Toronto, these municipalities have

no separate daily newspapers, and information by radio is directed to the province as a whole or to the City of Toronto.

Definite attention has been given to acquainting parents with the services and work of the Health Unit, but it is desired to develop a comprehensive program at the minimum cost, utilizing the facilities common to small municipalities. Further, it is desired to determine the value of the present health program by enquiry and observation in an adequate sample of the population.

The participation of the School of Hygiene in the work of the East York-Leaside Health Unit has extended over a period of eight years. This participation was made possible by The Rockefeller Foundation and the Department of Health of Ontario. During the original planning and throughout the period, Dr. William McIntosh, Canadian representative of the International Health Division of The Rockefeller Foundation, has given most valuable leadership. Dr. John T. Phair, Deputy Minister of Health of Ontario, has guided the program, serving as chairman of the advisory committee. Miss E. Kathleen Russell and Miss Florence H. M. Emory, of the University School of Nursing, and Miss Edna L. Moore, Director of Public Health Nursing of the Ontario Department of Health, have given most helpful counsel.

Alberta: The Only Rat-Free Province in Canada

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IN order to arrive at some explanation as to why Alberta should be rat-free when other parts of North America are infested, a study of various factors has been undertaken. They included physical geography, political geography, vegetation zones, climate, land settlement, land utilization, and rat invasion, migration and distribution. The study is not complete but has progressed to a point where preliminary publication appears warranted. Sufficient evidence has been elicited to indicate that a unique opportunity exists in western Canada for a detailed study of the methodology of rat invasions, migration, and distribution.

A number of years ago the theory was propounded, and received publicity, that a combination of climatic and altitudinal factors existed in Alberta that prohibited rats from becoming established. These factors were not discussed in detail, neither were they tested by seeing if similar conditions existed in rat-infested areas. This division more or less accepted the theory until 1939. In that year, bubonic plague infection was found in *Citellus richardsonii* Sabine, the prairie gopher. Now, plague in gophers is not a serious threat to human health if rats are not present. But plague in gophers is a serious threat if rats are present, because rats, which are easily infected, could become carriers of the disease, and living, as they do, in close contact with man, could transmit the infection to him. Therefore, in order to appreciate fully the plague problem it was necessary to find out if rats were absent from this province and, if so, whether they would continue to remain absent. Furthermore, what were the factors, if any, that prohibited their establishment here?

The survey was started in 1942. Over 8,000 questionnaires (shown in Figure 1) were returned by the Canadian railways and the railways in the north-western United States. These questionnaires gave information as to the year in which rats first appeared and their present distribution in the area. The area covered extended from the 95th meridian west to the Pacific Ocean. Further information was obtained through provincial, state, city, and district medical officers of health.

Land settlement, land utilization, climatological and topographical information was collected. The following report is an analysis of these data.

The area under consideration includes Manitoba, Saskatchewan, Alberta, and British Columbia, and is located geographically in the northwestern part of North America. It consists mostly of the Interior Plains and the Cordilleran Mountain System (Figure 2). The Interior Plains are part of the great plains

FIGURE 1

RAT SURVEY QUESTIONNAIRE

Railway System: Date:

Station at State or Province:

1. Are domestic rats — black, brown or gray — present in your town?
2. Approximate year when first noticed
3. How plentiful are they in the town?
 - (a) Well established
 - (b) A few
 - (c) Scarce
 - (d) Remarks
4. Are they established on farms in your district?
5. Is a rat control campaign carried out?

In town

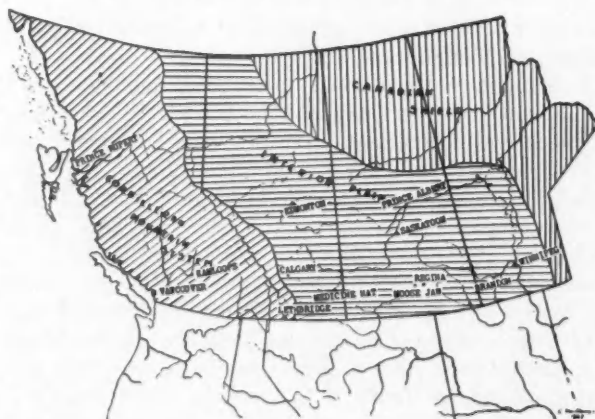
On farms
6. Is the rat population increasing?
7. General observations

Signature..... Agent

region that extends from the Gulf of Mexico to the Arctic Ocean. In Canada it embraces the three prairie provinces. The southern portion of the Canadian area includes the treeless prairies which represent the bulk of the settled part of western Canada and produce the great wheat crops. The terrain is rolling to level and drops gradually from west to east; the elevation ranges from 3,400 feet at Calgary to 800 feet at Winnipeg—700 miles to the east. The Cordilleran Mountain System covers practically all of British Columbia. It extends from

FIGURE 2

TOPOGRAPHICAL DIVISIONS OF WESTERN CANADA



—Alberta Government Photograph.

the south and parallels the coast. The mountains constitute a formidable barrier between the ocean and the interior plains region. The settlements are scattered along the coast and in the many fertile valleys of the interior. East to West travel is difficult, with the result that there are long uninhabited stretches along the highways and railways.

There are five main vegetation zones in western Canada—prairie, park, northern forest, thinly wooded, and mountain forest. These zones are generally well demarcated, but there are places where intrusion of other zones occurs. The vegetation zones had a direct bearing on land settlement and land utilization in western Canada. The prairie, being treeless and covered with short grasses, was easily broken and was early settled. The park land, consisting of prairies dotted with poplar bluffs, was eagerly sought after, as it provided tillable soil and logs for buildings and fuel. Consequently, these two zones were settled early. The northern forest and mountain forest areas are not suitable for agriculture, but have been settled by persons interested in fishing, mining, and lumbering. The exception to this is found in British Columbia where the fertile valleys warmed by the air from the Pacific are intensively cultivated. The thinly wooded areas are not settled to any extent.

The climate of the prairie provinces is fairly uniform, not producing extremes of temperature or precipitation and being conducive to good crop production. In southwestern Saskatchewan and southeastern Alberta, conditions approach semi-aridity, but both eastward and westward the amount of precipitation increases. The settled part of Manitoba has an average annual precipitation of 17 inches; the greater part of Saskatchewan has an average annual precipitation of 15 inches; and the average annual precipitation in Alberta ranges from 11 inches in the Brooks—Medicine Hat area to 21 inches along the eastern slope of the Rocky Mountains.

Temperature conditions vary generally throughout the region. Alberta has the mildest winters and southern Saskatchewan the warmest summers. The isotherm of minus 4° F. is the northern limit of the settled area, with the greater portion contained within the range of zero to plus 18° F. The range of average winter temperature over the settled region in Manitoba is from minus 2° to plus 4°; in Saskatchewan, from minus 4° to plus 14°; and in Alberta, from zero to plus 18°. The severest period of winter, in days, ranges from 80 to 110 in Manitoba, 20 to 110 in Saskatchewan, and 10 to 110 in Alberta.

British Columbia possesses a greater variety of climatic conditions. The more equable temperatures are found along the coast, with extreme temperatures occurring inland in valleys and on mountains. The mean annual precipitation ranges from 10 to over 150 inches, with the highest precipitation being registered along the coast. There are inland areas where the rainfall does not exceed 15 inches annually.

Land settlement in western Canada began around 1860 and continued until 1921. During this time there were sporadic influxes of settlers, but the greatest numbers came with the building of the transcontinental railways. Prior to 1870 western Canada was undivided. Manitoba was formed in 1870, British Columbia became a province in 1871, and in 1905 the provinces of Saskatchewan and Alberta were created. The total population of western Canada in 1871 was

79,475 persons—36,247 in British Columbia, 25,228 in Manitoba, and 18,000 in what is now Saskatchewan and Alberta. These figures indicate that considerable settlement had already taken place. British Columbia, being readily accessible by sea, was the first to be settled.

Manitoba was the first of the prairie provinces to be settled, and the early settlements were along the Red River, which rises in the United States and flows north; in fact, there is every indication that the early settlements in Manitoba were a northward extension from the Dakotas. This is borne out by the fact that there were direct connections by water, rail, and vehicle between the Canadian and the American settlements. Means of transportation available to the pioneers prevented them from travelling great distances. The usual procedure was for the late-comers to live on the outer fringe of established settlements. Early land settlement was like a slow inundation, with each new settler enlarging the settled area. With the advent of the transcontinental railways, the whole picture of land settlement changed. The development of the railways was a part of the planning for a Canadian economy. Intercourse with the United States south of the western Canadian border was inhibited by the erection of tariffs; efforts were made to discourage the building of branch lines into Canada by American railroads, and settlers from Eastern Canada and Europe were poured into the west. Settlements appeared at scattered points on the prairies, linked to each other by rail. Great distances separated towns and villages, and often individual habitations. This new method of land settlement gave man seven-league boots. Its full import in enabling man to outdistance his hitherto constant companion, the rat, will be revealed in the following pages.

RATS

The history of rats is closely associated with the history of man because rats, although they are not domesticated in the true sense of the word, live in close association with man. As near as can be ascertained, rats had their origin in the Nile Valley. This region is also believed to be the cradle of civilization. History tells us that man first developed his commercial tendencies around the shores of the Mediterranean. This caused him to travel from place to place for the exchange and sale of goods and services. Transportation by sea was a cheap and quick method and very large cargoes could be carried. On land, travel was usually accomplished by means of caravans which followed definite routes with established stopping places. Ship transportation was the most effective method of disseminating rats because there was an abundance of food and ample opportunity for reproducing. Living under such conditions, the rats were able to leave the ships at the various ports and establish colonies.

Dissemination by means of land transportation was much slower and, except for rats that were accidentally enclosed within packages of commerce, the movement from place to place depended entirely on migration by foot. Various habitations, stopping places, would become established along the caravan routes. These habitations would maintain domestic animals and the necessary foodstuffs for both man and animals. Rats would move along the caravan routes and become established in the habitations. Thus a larger and larger area would become infested. There is evidence that the present-day movement of rats from place

to place throughout the world is carried on in a manner similar to that of the early days of civilization.

There are three main species of rats—*Rattus rattus rattus*, the black rat; *Rattus rattus norvegicus*, the Norway rat; and *Rattus rattus alexandrine*, the Alexandra rat. These species have much in common, possessing the same life history and similar habits, and varying only as to size and coloration. The Norway rat is the important one in Canada. The other two species appear to be more plentiful in the Asiatic countries.

Rats were not present in North America until the colonists settled along the eastern seaboard. These colonists brought rats with them, mainly the Norway rat. Once established, the rats spread out with man in his occupancy of the continent. However, by the middle of the 19th century man became conscious of the menace of the rat to his health and economic welfare, and methods of control were instituted. This greatly reduced the multiplication of rats in the older established areas, and their spread to new areas was greatly retarded. By the time the great agrarian expansion occurred in the middle and northwest states, federal, state and provincial governments, as well as railways and steamship lines, had established vigorous rat control and exclusion methods. These programs were of great value to the farming areas of the West, but they did not prevent the rat from extending its range, they only slowed its rate of progress.

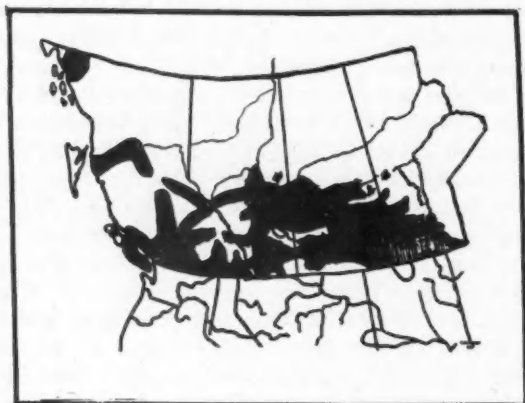
Rats in Western Canada

It is now known that the rat invasion of western Canada had its origin in the rat reservoir that was present in Minnesota and the Dakota Territory. The first record of rats in western Canada was made around 1900 when rats appeared on the Manitoba-North Dakota boundary. By 1910 the rats had moved northward, following the old settled areas, and become well established in the southern part of Manitoba. During the period 1910 to 1914 the invasion moved north and west, again following the older settled areas. Saskatchewan became invaded at two points, while the southern part of Manitoba showed rat infestation as far north as the Assiniboine River. During the period 1915–1919 the invasion engulfed practically all of the then inhabited area of Manitoba, and moved northwestward in Saskatchewan. The Saskatchewan invasion was three-pronged, with a northern, central and southern extension. Further invasion occurred during 1920 to 1924, with the same trend of the older settled areas being invaded first. In Manitoba the whole of the thickly settled part became infested, while in Saskatchewan the three-pronged advance continued. From 1925 to 1929 the rat invasion continued, with a definite consolidation of gains in the older settled areas. In Saskatchewan the advance now became one continuous front extending in an arc from Swan River, Manitoba, through Bromhead, Saskatchewan, to the United States border. During 1930 to 1934 a considerable gain was made on the northern and western fronts, with the greatest progress being registered in the older settled areas. The westward expansion during 1935 to 1939 infested practically all of the settled part of eastern Saskatchewan. The rats also crossed the North Saskatchewan, but were still held in check by the South Saskatchewan River. This continued during 1940–1944, with the South Saskatchewan being crossed and the main body joining up with the northern army at Borden.

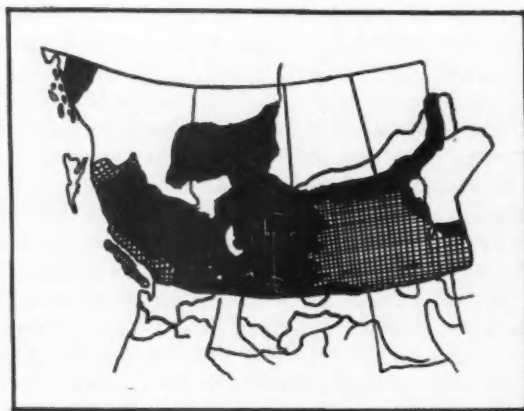
The rat distribution in relation to land settlement, 1910-1914 and 1940-1944, is shown in Figures 3 and 4.

FIGURES 3 and 4

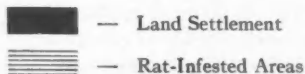
RAT DISTRIBUTION IN RELATION TO LAND SETTLEMENT



1910-1914



1940-1944

*—Alberta Government photographs.*

The invasion had certain definite characteristics. First, the older settled areas of Manitoba were the first to become infested. This condition continued to exist until the invasion had reached Winnipeg. Then the invasion began to follow the railways to the west. This fact does not show any marked change in invasion habits; rather it accentuates the character of the invasion, because from Winnipeg

west the older settlements were along the railways. The second point of interest is that such natural barriers as large creeks and rivers retarded the progress of the rats, and in many instances deflected them from their course. A third point, and one that proves the contention that rats live only in association with man, is that thinly settled and uninhabited areas remained rat-free. This is particularly noticeable in the southern part of Saskatchewan, where most of the land is devoted to ranching and is sparsely settled. A similar condition is observed in British Columbia, where there are long uninhabited stretches, with a consequent dearth of rats.

From the above observations certain deductions can be drawn. The first is that rat progress is retarded by uninhabited regions; the second, that such natural barriers as mountain ranges and rivers will stop or greatly hinder rat migration. The second consideration is of vital importance to Alberta, and can be utilized to keep this region rat-free.

Methods of Invasion and Causes of Migration

From all available evidence it appears that the rat invasion of western Canada was carried out on foot. This does not preclude the belief that some rats were brought in by river boats and railway cars, but it does emphasize the fact that the invasion had its origin in the older-settled and rat-infested territory of Minnesota and the Dakotas.

The migration of rats from place to place—whether a building, a city block, a section of land, a township, or a province—has the same motivation, namely overcrowding, with a consequent lack of food. Experiments have demonstrated that rats will migrate when their food supply is cut off.

Overcrowding is a relative thing, and is brought about by a combination of factors. Its end point is a competition for existence. Overcrowding does not necessarily mean that a great multitude exists in a given space. Rather it implies that the carrying capacity of a given area is limited, and is thus tied to a variable maximal population. For instance, one area may have a carrying capacity of three rats per city block with four rats causing a condition of over-crowding, while another area may support twenty rats per city block. Thus it can be seen that overcrowding is specific rather than general.

The causes of overcrowding are of two general types, natural and artificial. The natural cause is a great increase in population per given area brought about by a suitable distribution of the sexes, plenty of food and shelter, and an unfettered existence. Under such conditions a population strives to remain within the borders of such a 'Utopia'. However, the carrying capacity of such an area is fixed, with the result that as the population increases the competition for existence becomes more keen. With the approach of the maximal population for the area, many of the individuals, and often whole groups, are unable to withstand the competition and are forced out into adjoining areas where conditions are not so favourable but are sufficient to maintain an existence.

The artificial causes are different in origin, but in execution have a similar effect. Rat-proofing is an important factor. It tends to restrict the movement of rats, and also restricts their access to food supplies. Furthermore, it has a tendency to restrict contact between the sexes. Other important factors are

control measures such as shooting, trapping, and poisoning, which reduce the population and, in some cases, eliminate it. Generally speaking, the effect of any type of control is to drive the rats out of the control area. These rats move to adjacent uncontrolled areas where they become established. If the area has not been previously invaded, the migrant rats become established and, if the conditions are suitable, soon produce a high population. If the area is already infested, the addition of the migrant rats soon causes overcrowding, and the process starts all over again. From the above it can be seen that control measures, improperly applied, may actually speed up the spread of rats.

From the foregoing it is apparent that amongst an uninformed human population the spread of rats is inevitable. The invasion of western Canada has demonstrated that. The rats could have been stopped, or at least greatly retarded, at any given point during the past forty years if proper measures had been applied by an informed public. Even today great success could be had if large-scale control programs were instituted in rat-infested areas, and rat-exclusion programs established to keep uninfested areas rat-free.

Rats in relation to Alberta

On many occasions during the past forty years rats have been reported in Alberta. And on each occasion the rats were brought in by the railways, but on every occasion they were found and destroyed. The people of Alberta are extremely wide-awake to the rat menace, and are determined to keep Alberta rat-free. However, the true answer to the problem of keeping Alberta rat-free lies not in the interest and enthusiasm of the people of Alberta; it lies in a definite rat-exclusion campaign. A rat-exclusion campaign that should start, not when the rats reach the Alberta border but *now* on the west bank of the South Saskatchewan River fifty miles east of the provincial border. The battle that is fought there, if and when it is fought, will determine how long Alberta remains rat-free.

The Decrease in the Length of Stay of Patients in Sanatoria

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WHEN one reviews the medical statistical reports compiled by the Division of Tuberculosis Prevention of Ontario,¹ it is quite apparent that the average length of time for a complete course of treatment in sanatoria has gradually decreased over the past few years. The question of the increased re-admission rate might also be combined in this discussion as it may be very closely associated.

The average length of treatment in 1941 was 430 days. During the next few years this figure gradually decreased, until by 1946 it had fallen to 394 days. This average figure includes all the admission cases in sanatoria, including investigation cases who remained for perhaps only a few weeks, as well as extremely ill cases who lived for only a few days or weeks.

On reviewing the re-admission figures over the same period, it is seen that in 1941, 23.9 per cent of the patients admitted had been in a sanatorium previously. Over the next few years there was a gradual increase in this figure until, by 1946, 25.8 per cent of the admissions had previously been in a sanatorium. These re-admission figures include cases that have had several previous admissions. A discussion of both these statements at the present time brings forth mostly theories and impressions, rather than definite facts why each is so. It was felt that the question of the decrease in length of time for treatment might be considered under three headings: (a) the patient's condition before entering a sanatorium, (b) the treatment method during the period in a sanatorium, and (c) the after-care program.

Prior to Going to Sanatorium

During the past few years considerable survey work has been done, including tuberculin skin-testing and X-ray surveys. The latter method is much the more satisfactory one and has been successful in discovering an increased number of cases of tuberculosis in the early minimal stage. Reviewing the statistical tables from 1941 to 1946, it is quite apparent that the proportion of minimal cases has increased and that of the far advanced has decreased. In 1941 the percentages were as follows: minimal, 20.5 per cent; moderately advanced, 34.5 per cent; far advanced, 45 per cent. This ratio had changed by 1946 to the following: minimal, 26 per cent; moderately advanced, 35.4 per cent; far advanced, 38.6 per cent. It is,

¹Medical Statistical Report of Sanatoria in the Province of Ontario, 1941 to 1946. Division of Tuberculosis Prevention, Department of Health of Ontario, Toronto.

therefore, apparent that more of the cases entering sanatorium are being diagnosed when the disease is not so far advanced. Therefore, the period of time required for treatment is considerably less.

Accompanying this survey work there has been a great deal of publicity regarding tuberculosis. This has made the public tuberculosis-conscious, so that medical advice about chest illnesses is sought at an earlier date.

An indefinite, theoretical consideration regarding the virulence of the type of disease present might be considered. If the invading organism were gradually becoming less virulent, it would automatically imply that the patient's relative resistance would be higher and, therefore, the period required for treatment shorter in length. There is no actual confirmation that this is so. On the contrary, some of the cases in the men returned from overseas have been very virulent, suggesting that the type of tuberculosis in Europe to which they had been exposed was produced by a more virulent type of organism than the type found in Canada. This, however, is highly conjectural.

Changes in Treatment Methods during Stay in Sanatorium

Bed rest still remains the most effective treatment for tuberculosis, but collapse treatment may assist this greatly. During the past few years we have changed our collapse measures somewhat, and are now recommending thoracoplasty operation in many cases which previously would have been treated by pneumothorax collapse. A major operation might seem at first to be too drastic a procedure, but when the end result of several years of pneumothorax treatment is compared with that of thoracoplasty collapse, the latter method is seen to be the one of choice and actually less disabling in many cases. The permanent type of collapse is not accompanied by the hazards of pneumothorax refills nor the dangers of re-expansion and, therefore, offers better insurance for continued good health.

There is, as yet, no specific treatment for tuberculosis, although the discovery of streptomycin might herald a step toward this ultimate goal. Some cases are showing good results from treatment and this effect will be seen in a decrease in the length of stay in sanatoria.

The After-care Program

Since the Provincial Government took over the costs of maintenance of patients in sanatoria, the after-care measures have been looked after by the local municipalities. They have gradually become more aware of their responsibility in this matter, and many welfare measures have become more readily available to the patients on discharge. When the patient's condition has approached the healing stage, discharge is allowed as soon as satisfactory home arrangements can be made, and convalescence is completed there. With adequate after-care measures, we are enabled to let the patient go at a somewhat earlier date, which decreases the length of time necessary to remain in a sanatorium. Also, in the chronically ill group or in the group who will never be able to look after themselves financially, it has been possible to arrange discharge. Even chronically ill cases with sputum persistently positive for tubercle bacilli, are allowed to go home under some welfare

assistance plan and with the approval of the medical officer of health when the maximum benefit from sanatorium attention has been received.

Some of the above considerations present the more ideal reasons why patients leave sanatoria at an earlier date. However, there are other reasons that appear to enter into this question and may be discussed as follows:

(a) *The availability of work with high wages.* During the past few years there has been the pressure of increased production because of the war effort. This was followed by the efforts of reconstruction. To contrast this period with the depression days prior to the war, it is quite apparent that the opportunities for making money are much greater at the present time. When no jobs were available and rates of pay were poor, no such incentive to early discharge from institutions was present.

(b) *Unsettled living conditions.* In many cases, particularly in the married group, living conditions have been unsatisfactory and patients have been considerably disturbed during their period of care in a sanatorium because of this factor, which has assumed a much greater importance in the past few years.

(c) *Increased living costs.* The cost of living has been on the increase, and for the patient with family responsibilities, the difficulties at home have made a prolonged stay in a sanatorium very difficult.

In consideration of the increased re-admission rate, the following factors might be listed:

1. *Insufficient period of treatment in sanatorium on the first admission.* This factor is very definitely seen in certain cases that refuse to stay in sanatorium as long as recommended. Discharge had been effected at an earlier date than was considered advisable.

2. *Refusal of the patient at first to accept the recommended treatment, such as surgical collapse.* Some patients have definitely broken down because of ineffective collapse measures.

3. *Insufficient collapse treatment, from the medical standpoint.* In many cases it is now seen that pneumothorax collapse was not the ideal method and that thoracoplasty should have been done. This is now being corrected by recommending thoracoplasty at once.

4. *Patients who fail to cooperate in obeying the cure measures as laid down.* Many of these cases constitute the problem cases in sanatorium from a disciplinary standpoint. Either from mental retardation or simply wilfulness, they refuse to limit their activities as recommended.

5. *The case with poor resistance to tuberculosis.* This is a rather indefinite factor, as we do not know why certain patients have good resistance and why others have poor resistance. However, it is evident that certain patients are not able to combat their disease, whether minimal, moderately advanced, or far advanced in extent. Many of these cases become far advanced, and as there is no specific way of treating their infection, their ultimate reactivation following a period of treatment is to be expected. Many of these cases are kept alive much longer than they were a few years ago, perhaps because they are diagnosed in an earlier condition and perhaps because we are treating

them more effectively. They are, therefore, living longer but at the same time increasing the incidence of re-admission cases.

In order to obtain more information regarding re-admission cases, 56 of these cases at the present time in the Mountain Sanatorium were reviewed. Four groups of cases were chosen: (a) from the admission service, (b) from an exercise pavilion, (c) from the surgical service, (d) from a medical infirmary service. The cases were reviewed under certain headings and the following are the results:

(a) *Sex incidence*: There were slightly more male cases than female cases, but this compares about the same as the male-female ratio of all admissions.

(b) *Marital status*: There were 33 married and 23 single, which is approximately the same ratio as that of all adult admissions.

(c) *Age incidence*: Many were in the older age group. There were actually 29 over 40 years of age and 27 under 40 years of age. This is the reverse ratio of all admissions.

(d) *Average length of stay in Sanatorium on first admission*: This worked out to be 600 days. If the ones staying seven months or less were omitted, the average stay rose to 750 days. It is to be noted that the average length of stay of this group on first admission was far longer than the average length of stay of all patients as shown by Provincial tables. Eighteen of these cases had more than one re-admission.

(e) *Extent of disease on first admission*. Twenty of these cases had far advanced disease, 30 had moderately advanced disease, and 5 had minimal disease; 1 case was a surgical case having no pulmonary tuberculosis. Only 3 of the minimal cases were returned with active pulmonary disease, the others being admitted because of surgical tuberculosis. It is apparent from this result that the more advanced cases constitute the majority of the ultimate re-admission group. There were few minimal cases in this group.

(f) *Type of pulmonary disease present on first admission*. It was rather difficult to draw any conclusion from this. Most of the cases had exudative disease but many were combinations of exudative and proliferative and many showed excavation.

(g) *Complications*. Twenty-three of these cases showed complications, which represented an incidence of 41 per cent. The complications included bone and joint, intestinal, genito-urinary and other conditions. The usual incidence of complications in all sanatorium admissions is about 25 per cent. This group, therefore, showed more complications than usual and illustrates the increased seriousness of pulmonary disease that also has another focus of infection.

(h) *Collapse treatment on first admission*. Thirty of these cases had collapse treatment, with the following types being done: pneumothorax 19, phrenic nerve crushing 7, thoracoplasty 3, and extrapleural pneumonolysis 1. It is rather difficult to draw any exact conclusions from these figures. Some of the pneumothoraces were unsatisfactory, and ultimately thoracoplasty was carried out. It was thought that this would have been a better procedure had it been done in the first place.

(i) *Condition on discharge.* Only 17 of these cases were apparently arrested on discharge, 22 were quiescent, 3 improved and 5 still active. Grouping the last three together, one might state that 30 of the cases fell into the rather unstable group.

(j) *Prognosis.* On discharge after the first admission, only 12 were thought to have a good prognosis at that time, 19 were considered fairly good, and 25 were considered poor. Re-admission of this last group of cases was to be expected.

(k) *Length of time out of sanatorium before re-admission.* This varied from one month to ten years. Forty-three cases were out over one year, the average of this group being three and a half years.

(l) *Employment.* Twenty-five cases were not employed at all. This represents nearly 50 per cent of the cases. The others were employed to some extent, but in this survey it is difficult to estimate what part their work played in their re-activation. Many of those listed as working were doing only light work such as housekeeping, light office work, or part-time work.

(m) *Examination after discharge.* All of these cases reviewed were from districts where re-examination was readily available and, as far as could be ascertained, they had all been re-examined reasonably well.

(n) *Financial status.* It was rather difficult to estimate this exactly, but 42 of the cases were considered to be in only fair to poor circumstances. Therefore, 75 per cent of this group were not financially well off.

DISCUSSION

On the average, the actual length of stay in the Sanatorium in this re-admission group was seen to be far above that of the average case in sanatorium, namely, 600 to 750 days, as compared with 434 days. This means that these cases had received far more treatment than the average case in sanatoria, and despite that fact, had broken down. As stated above, however, the average length of stay of all cases in sanatoria included those who were admitted for investigation for a few days, as well as those cases who died after being in sanatoria for a few days. If these two groups were excluded, the average length of stay in sanatoria as obtained from the Provincial Statistician are as follows: minimal cases, 305 days; moderately advanced cases, 550 days; and far advanced cases, 850 days. These figures are for the whole Province for the year 1946 and represent a truer average of what is recommended in treatment, namely approximately 10 months for the minimal case, 18 months for the moderately advanced case, and 28 months for the far advanced case. It is seen that the average re-admission case has been treated for a long period of time, but even this has not prevented ultimate breakdown. In reviewing their conditions on discharge, it was found that a relatively small percentage had reached the stage of apparently arrested disease. Therefore, despite the relatively long period of treatment, these cases were not treated quite long enough, as a higher percentage should have been treated to the stage of being apparently arrested and probably a better result would have been obtained.

On reviewing the condition on discharge of the far advanced uncomplicated pulmonary cases as given in the statistical tables, it is seen that 50.4 per cent were discharged as quiescent or unstable and only 8.4 per cent were arrested or apparently arrested, while 40.5 per cent had died. When the table showing uncomplicated moderately advanced pulmonary cases is reviewed, it is seen that 78 per cent of the cases on discharge were in the quiescent or unstable group and only 16.8 per cent are listed as arrested or apparently arrested. It is felt that these figures will definitely have to be improved even at the expense of increasing the average length of stay in sanatorium, before the end results become better and the re-admission rate decreased.

The serious significance of the pulmonary case that also has another area of active disease should be emphasized. The statistical tables show the death rate of the complicated far-advanced cases to be over one and one-half times as high as that of the uncomplicated cases. The complicated moderately advanced cases had a death rate nearly six times as great and in the minimal group the complicated cases had a death rate 27 times as high.

CONCLUSION

The decreased period of treatment in sanatoria has been discussed and a review of 56 re-admission cases in the Mountain Sanatorium has been presented. It is quite apparent that the re-admission group involves chiefly the more advanced cases, especially when these cases have not reached a satisfactory stage of healing at the time of discharge. Various reasons have been advanced for their ultimate breakdown, but the cause for the majority other than far advanced disease is unknown. Three generalities may be stated: earlier diagnosis, more effective treatment measures, and more adequate after-care measures. When these three conditions are met, the above discussions will hardly be necessary.

Canadian Journal of Public Health

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PROFESSIONAL TRAINING IN PUBLIC HEALTH

THE importance of professional education in public health needs no emphasis.

It is of interest to recall that as early as 1889 it was required by legislation in Great Britain that physicians serving as health officers should hold a diploma in public health. The requirements for the diploma included experience and training under the direction of a health officer. Great Britain has continued to give leadership in establishing standards for public health personnel. The General Medical Council has been responsible for defining the qualifications of medical officers of health and for prescribing their educational curricula. The Royal Sanitary Institute for years has provided courses of instruction and held examinations for health visitors, sanitary inspectors, and inspectors in special fields including food, plumbing, and housing. In 1925 a conjoint board was established by the Ministry of Health in association with the Royal Sanitary Institute, for the certifying of sanitary inspectors who would serve in Great Britain. Sanitary inspectors licensed in Great Britain are required to possess the Oxford Entrance qualification corresponding to university entrance in this country. The Royal Sanitary Institute has continued to qualify sanitary inspectors for service in several other parts of the British Commonwealth. The Ministry of Health, through the establishment of the Central Midwives Board, has made notable progress in the development of qualifications and training for midwives. A very large percentage of all confinements are cared for by licensed midwives. The service rendered by them has been of a high order, as reflected by the low maternal mortality rate in Great Britain. Certified midwives are graduates of a two-year course of training in midwifery in institutions approved by the Board.

In the United States, the American Public Health Association, through its Committee on Professional Education, has made an outstanding contribution to the strengthening of health services by formulating qualifications for public health personnel after consultation with the various professional societies. Full opportunity is given for the incorporation of the views of all concerned, and the recommendations of the Committee are presented to the American

Public Health Association for approval and adoption. Thereafter, the qualifications are subject to revision by the Committee at frequent intervals. During and since the war years, the Committee, under the chairmanship of Dr. W. P. Shepard, has prepared qualifications for the majority of personnel in the public health field, and these have been duly approved by the Association. The Social Security Act of 1935 included the provision of Federal grants to all States meeting certain requirements; and the appointment of the Committee in 1935 indicated that the leaders of the Association foresaw that not only would there be a great extension of health services but it would be urgent to safeguard public health by establishing qualifications for those engaged in rendering the services.

It was not easy to obtain agreement as to the essential qualifications, but the Committee's increasing sense of the need for standards led finally to the establishing of basic qualifications for the major groups of personnel concerned. One of the requirements of the Federal Government grants was the selection of personnel according to the principle of merit. Here again, the American Public Health Association rendered most helpful leadership by utilizing the work of the Committee on Professional Education to establish a practical merit system for the use of State and local governments. In Canada, as in Great Britain, the position of health officer has been safeguarded. The removal of a health officer cannot be made without a substantial reason and the approval of the Minister of Health of the province in which he serves. There has been little evidence of political patronage in public health appointments in Canada. Unfortunately, this has not been true in the United States, and the introduction of the merit system has already been of great value in preventing political interference as well as in fulfilling its major objective of placing competent personnel in positions for which they are suitable.

With the hearty approval of the American Public Health Association, the qualifications recommended by that body for all personnel engaged in public health have been adopted by the Canadian Public Health Association, with the necessary changes to meet Canadian needs. Thus, Canadian standards will be generally in accord with standards in the United States. The importance of standards in Canada will become increasingly evident as health services are extended through the application of Federal grants for public health. In this way, the Canadian Public Health Association will give valuable assistance to the development of local health services throughout the Dominion.

The enlarging field of public health is reflected in the changing courses of instruction and the introduction of new courses. The curriculum for the Diploma in Public Health, as first offered in one of our Canadian universities in 1908, contained the subjects of meteorology, climatology, forensic medicine, and toxicology. In the field of sanitation, emphasis was placed upon fumigation, drainage and plumbing. Quarantine regulations were stressed. Today the emphasis is placed on the training of the health officer as the administrator of a department concerned with all aspects of health. It is necessary that the health officer be acquainted with the field of social science and the problems of hospitalization, and that he look forward to a closer integration of preventive medicine and medical treatment services in the future.

In Great Britain, the General Medical Council revised in 1945 the requirements for the training of health officers, on the recommendation of the Society of Medical Officers of Health. Generally speaking, laboratory courses in bacteriology, chemistry, and parasitology were reduced by substituting demonstrations for actual laboratory experience. The emphasis has continued to be placed on practical experience. The course includes detailed study of statistics and epidemiology, and bacteriology and parasitology as applied to epidemiology; of legislation and administration, health education, nutrition, sanitation, housing and town planning, mental health, occupational health, and the interpretation of engineering plans. Medical specialists in the field of public health take their qualification in public health, with further study for higher degrees such as the Doctorate in Science if they so desire, but their training and certification for their medical specialty is the same as for medical specialists outside the public health service.

In the United States, at the close of the war, it was expected that many veterans, taking advantage of the financial assistance offered by the Federal Government, would choose public health as a career; and it was anticipated that existing university facilities would be overtaxed, with the result that new courses might be established in universities and colleges without adequate staff and facilities. Such courses would not provide satisfactory instruction, and probably many of them would be discontinued after a few years, as the demand decreased. At that time twenty-nine institutions and universities in the United States were providing postgraduate instruction, granting thirty-four degrees, diplomas, or certificates. At the request of the Government, a conference of the leading schools providing postgraduate courses in public health was held to discuss the question. As a result, the American Public Health Association was asked to undertake the accrediting of schools of hygiene and, after much consideration, the Association acceded to the request. The success of the accrediting is due to Dr. C.-E. A. Winslow, whose years of experience in teaching, research and administration signally qualify him to guide this exacting undertaking. The accreditation of schools of hygiene has been of great value, as it has defined the requirements for institutions giving postgraduate training and has encouraged important extensions and improvements to be made. Further, the confusion in degrees and diplomas has been removed by agreement in the United States that the schools will grant the degrees of Master of Public Health and Doctor of Public Health.

It is pleasing that the American Public Health Association, which has always been continent-wide in its membership and activities, has included Canada in the accreditation of schools of hygiene. The granting of the Diploma in Public Health to physicians in Canada follows English practice, and throughout the country it is recognized by the medical profession and the public alike as the qualification for the health officer. It is the custom in Great Britain to grant diplomas in the special fields of medicine, and there is much to be said in favour of the continuation of the granting of the Diploma in Public Health in Canada. This qualification is the counterpart of the Master of Public Health degree given in the United States and is so recognized by the Accrediting Committee. Similarly, there have been established in Canada the

Diploma in Dental Public Health, for dentists, and the Diploma in Veterinary Public Health for veterinarians. In each instance, postgraduate training in public health is linked with the professional faculties concerned.

In Canada, the Canadian Public Health Association has made an important contribution by serving as a training and certifying body for sanitary inspectors. Since 1935 the Association, in cooperation with the Canadian Institute of Sanitary Inspectors, has established requirements for preliminary education, provided courses of instruction through correspondence, and conducted annual examinations in cooperation with the Provincial Departments of Health. The Certificate in Sanitary Inspection (Canada), granted by the Canadian Public Health Association, is now recognized as the qualification for sanitary inspectors throughout the country. To date, almost seven hundred inspectors have obtained the Canadian qualification. The Association is now giving consideration to the possible extension of the plan of certification to include statistical clerks.

The importance of the provision of professional training grants for public health and hospital personnel by the Government of Canada, as part of the national health grants for assisting the Provinces, cannot be overstressed. Without financial assistance, the great majority of those planning a career in public health could not undertake the necessary professional training. Five hundred thousand dollars annually will be made available, half of which will be available for the training of public health personnel. This is thoroughly justified because those entering the field of public health are engaging in public service. The Department of National Health, in administering the grants, has announced the provisions for postgraduate study. The financial provision covers travel, maintenance, and fees, including expenses for field experience as well as academic instruction. It is indeed gratifying that the importance of professional training in public health has been so clearly recognized and that satisfactory provision has been made by the Government for assistance to those who desire to serve in the field of public health.

It must be remembered, however, that the universities and colleges providing training are not receiving any direct assistance in the solution of their problems of providing facilities and staff to make adequate courses possible for enlarged numbers of students. The fees received represent but a small part of the cost of training. The Canadian Public Health Association expresses its appreciation of the universities and institutions which have provided instruction for health officers, public health nurses, engineers and other essential members of the public health service. The recognition by the Dominion Government of the importance of professional education encourages the Association to believe that support will be given to make possible the extension of facilities in our Canadian universities for the training of public health and hospital personnel.

A Health Unit Develops Assistants in Education

H. SIEMENS,¹ E. J. KIBBLEWHITE²
J. A. MacDOUGALL³ and B. JOYCE LEWIS⁴
Edmonton, Alberta

GREAT enthusiasm and full confidence in its ability causes many a new health unit staff to embark optimistically on a program of public health service. Once the routine services, the value of which is well recognized by the people, are initiated and operating satisfactorily, other services that are probably no less important but much less thoroughly understood are attempted. When these meet with indifferent or poor response, many of us become discouraged and conclude that our people do not wish to go beyond the bare essentials in public health service.

Such conclusions are neither realistic nor intelligent. A public health staff requires insight and understanding of the problem no less than does the population to be served. If we can bring to our people an understanding of the functions of sound nutrition, sanitation, and mental hygiene equal to their understanding of communicable diseases, dentistry, and physical treatment, remedial and preventive measures in these fields can be implemented with equal ease. A truth which sometimes eludes us is that in all fields of public health service our success is only in proportion to the understanding, insight and acceptance of the needs by the people. Where these are not recognized, the problem becomes primarily one of public health education, for which the public health staff must assume responsibility. In the past, this field has had mainly academic interest for us, but it must assume a

more important place in our program if we are to progress.

There is, in this Province, no health unit with a staff large enough nor with sufficient training and experience to maintain the routine services demanded and in addition to carry on an educational program that will create the necessary demand for extension of services into newer fields. Our budgets are definitely limited, prohibiting increases in staff. Our experience with volunteer help in the field of health education is most limited, and what experience we have had has not been altogether happy. Health education is a specialized field requiring special and careful training.

Health departments recognize that sound mental health is the most valuable asset any individual can possess; that it is basic to sound development; and that the successful institution of a mental health program in a community is dependent on adequate and reliable health education services to an even greater degree than most other health programs.

In 1946, the Edmonton Rural Health Unit started a well-defined program in mental hygiene for schools, outlined elsewhere. We realized at the time that outside assistance would be needed in order to assure success. Since the limited program was confined to the school population, it was decided that our school teachers, because of their academic background, training, and their position in the community,

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offered the best prospects for assistance in the educational work that would have to be done. Teachers almost everywhere are asked to assist outside agencies in a great variety of ways and usually without extra pay. Health education work, if it is worth doing at all, is worth remuneration. By this means we can circumvent one of the weaknesses of volunteer help; that is, if we pay for help we are free to ask for that help and demand certain standards.

With the above considerations in mind, the authors, early in 1947, outlined a course in Constructive Medicine for teachers of the Edmonton Rural Health Unit and sponsored by the Health Unit. No tuition fees were charged. The Faculty of Education, University of Alberta, agreed to grant to successful candidates, one credit towards a Bachelor of Education degree, and the Superintendents of Schools and School Boards agreed to pay an honorarium of \$50.00 to every teacher who completed the course and conducted a satisfactory program in health education with adults of the local School Districts.

It was felt that the course in Constructive Medicine should be a very inclusive one that would present as clearly as possible the integration and interrelation of the various phases of public health, such as communicable disease control, sanitation, general health services, mental health, nutrition, epidemiology, and physiology. In other words, it should take the form of a course in "living". For that reason it was designed to emphasize the mental hygiene content.

The accompanying outline was evolved and was closely followed in the course presented during the month of July, 1947. A secretary took and mimeographed the notes, leaving everyone free to devote himself entirely to the discussions.

Thirteen teachers with from three to fifteen years' teaching experience registered on July 2, 1947. They divided themselves into five groups,

each of which undertook to conduct the class during one morning a week. The reference material for each period had been assigned and was apportioned by members of the class. During class periods reports on the reference material were presented and ample time for discussion was provided. There was a minimum of formal teaching. The teaching staff, formed of the authors, was present to see that serious mistakes did not remain uncorrected and to take an active part in the discussions.

The afternoons were devoted to visits to a general hospital, a mental hospital, the Vital Statistics Bureau, the Provincial Department of Health, the Guidance Clinic, and other pertinent services, and to talks given by visiting authorities in the fields noted. In this way an attempt was made to familiarize the students with the services that would be valuable to them and to acquaint them with senior officials of those services.

The course was well received by the students. They have now completed a season's work in their home communities and it has been possible to assess in part the effects on the teacher, the school, and the community.

Most teachers state that they now treat their students less as a class and more as individuals. They are more conscious of the individual personality variations in students and less impatient with individual peculiarities. Discipline in school is generally more flexible, more practical, and more effective. Individual personality and behaviour problems have been solved in many cases.

The teachers state they know their Districts and people more intimately than before. They are better acquainted with the families of their students and, as a result, find it easier to interpret and understand personal problems.

Many letters have been received from members of study groups in rural areas who express their appreciation of the services of the teacher

whose concern now includes the community as well as the school. Adults have come to the Health Unit office for assistance for themselves or their children as a result of study group work. Health Unit services are more fully understood in school districts staffed by these teachers.

A great advantage from the point of view of the Health Unit is the

knowledge that in each of these schools is a teacher who knows our problems and aspirations and is trained and willing to assist actively with both. This assistance is especially valuable and necessary to us for the success of the mental hygiene program of the Health Unit service.

COURSE IN CONSTRUCTIVE MEDICINE
EDMONTON RURAL HEALTH DISTRICT
July 2 - 31, 1947

| July | 9 - 10.20 a.m. | 10.40 - 12 noon | 1.30 - 5 p.m. |
|------|---|--|---|
| 2 | Introduction | Prenatal care — medical nutrition | Organization of student groups |
| 3 | Prenatal care — psychological | Growth and development in pre-school years — Physical development and motor control | Dentistry in public health Dr. H. R. MacLean |
| 4 | Growth and development in pre-school years — Development of interests Behaviour patterns | Defects and deviations of development | Cancer control Dr. Field |
| 7 | The teacher's opportunity in nutrition education | The early school years— Beginning school and its problems The first 3 years at school | Tuberculosis service Dr. Davison |
| 8 | Milk: needs ways of using it Cereals: their place in the diet | Protective and constructive means to promote healthy development | Health education Mr. Evoy Miss Purdue |
| 9 | Fruits and vegetables— ways of using them Meats, fish, poultry, eggs | Developmental progress from birth to maturity —a panoramic prospectus | Agriculture and health Mr. Longman |
| 10 | Meal patterns— making meal time a good time | General principles of development— Laws of growth and their application | Endocrinology Dr. Cantor |
| 11 | How to buy food How to care for food Foods, fads and fancies | Psychosomatic medicine Dr. Thompson | Interrelatedness of growth— Behaviour Physical factors Psychological factors |
| 14 | Growth: Influence of— Heredity Endocrines Illnesses Emotions | Growth: Influence of nutrition and routines— Rest Activity Elimination | Junior Red Cross Miss Herman Sanitation Mr. Mallett |

COURSE IN CONSTRUCTIVE MEDICINE—*continued*

| July | 9 - 10.20 a.m. | 10.40 - 12 noon | 1.30 - 5 p.m. |
|------|--|---|---|
| 15 | Growth: Influence of— Home School Church Camps | Growth: Influence of culture— Socio-economic status Movies and news- papers Recreational activi- ties | Family Allowance Miss Munroe |
| 16 | Vocations and guidance Mr. Wagner | Growth and use of the body—Physical growth | Growth and use of the body—Motor control |
| 17 | Growth of sense, percep- tion and judgment | Development of memory, imagination, creative activity | Guidance clinic Dr. Schrag |
| 18 | Thinking and reasoning Dr. Lazerte | General personality trends | Mental deficiency Dr. D. L. McCullough |
| 21 | Conflict and aggression Cooperation and friendship | Moral judgment and psychosexual develop- ment | Jr. Court judge Family welfare Miss Dick |
| 22 | Summary of growth achievements | Communicable disease control Infant welfare service | Psychiatry Dr. R. R. MacLean |
| 23 | Family Roster service | Personal hygiene | Vital statistics Mr. Packford |
| 24 | Sex hygiene | Venereal disease control Dr. Rentier | Visit to Provincial Mental Institute, Oliver |
| 25 | School health services | The school plant | Visit to University Hos- pital |
| 28 | Sanitation of public and private premises | Appraisal of District health needs | Faculty of Education Dr. Lazerte |
| 29 | Conduct of study groups | School problems | Provincial Department of Health Dr. Bow |
| 30 | Review | | |

BOOKS

Diagnostic Procedures in Virus and Rickettsial Diseases. New York: American Public Health Association, 1790 Broadway. First edition, 1948. 347 pages. \$4.00.

THIS VOLUME is offered in acknowledgment of the increasing demand for a collection of laboratory methods applicable to the diagnosis of virus and rickettsial diseases of man. It was written at the instigation of the Laboratory Section of the American Public Health Association, and contains sixteen independent sections, each contributed by one or more authors of international reputation. The following are the major diseases discussed: psittacosis, lymphogranuloma, trachoma, inclusion blennorrhoea, variola, influenza, primary atypical pneumonia, mumps, poliomyelitis, encephalitis, rabies, herpes simplex, yellow fever, dengue, sandfly fever, and the common rickettsial infections.

The instructions given are sufficiently complete and detailed to enable a worker already trained in laboratory techniques to carry out the diagnosis of the various infections, and the authors are to be congratulated on the clarity of their presentations.

This book is warmly recommended to workers in virus laboratories and to teachers and senior students of virology. Appearance at this time is particularly opportune, in view of the realization in many countries that more adequate facilities must be provided for the diagnosis and study by modern laboratory methods of viral and rickettsial diseases. Such expansion is largely held back by a shortage of virus workers, and this book will play an important part in the practical training of suitable persons.

In the preface, it is suggested that in future editions the text may be expanded and improved. One direction in which expansion would prove of value concerns the provision of introductory chapters on basic techniques such as, for example, microscopy, staining, filtration, egg inoculation, statistical methods, and animal injection. More attention will probably then be paid to the use of the electron microscope in diagnostic procedures, which appears to have considerable promise.

The continued success of this work is assured, and the Editor, Dr. Thomas Francis, and his contributors are to be congratulated

on a major contribution to the literature of virus and rickettsial diseases.

A. J. Rhodes

Voluntary Medical Care Insurance in the United States. By Franz Goldmann, M.D., New York: Columbia University Press, 1948. 228 pages. \$3.00.

THIS is a companion volume to "Public Medical Care" by the same author. An account is given of the development of voluntary medical care insurance in the United States over the past twenty years. The subject matter is divided into nine chapters in which such things as the principle of medical care insurance, cash indemnity plans, Blue Cross plans, Blue Shield plans, individual practice plans and group practice plans are discussed. The last chapter summarizes the limitations and possibilities of the entire principle of voluntary medical care insurance.

The book bespeaks a very thorough knowledge of the subject and should be an important contribution to sounder thinking. It will be most useful to students of the medical care problem.

M. H. Brown

Mental Health in Modern Society. By Thomas A. C. Rennie, M.D., and Luther E. Woodward, Ph.D. New York: The Commonwealth Fund, 1948. 424 pages. \$4.00.

THIS book is addressed to everyone concerned with mental hygiene problems, and is of particular interest in these days of proposed expansion in this and other health fields.

Commencing with the background of the recent war and the effects of this war upon the development of psychiatry, this book reviews the discovery of poor mental health among recruits, the methods used for detection and for treatment in its broadest aspects. It further describes the teamwork among the workers concerned—clergy, teachers, social workers, nurses, etc., emphasizing that the period of professional isolation has come to an end, and that so many workers, together, can play a part in improving and maintaining the mental health of our society.

The tone of the book is on palliative help in

obtaining "maturity," and the inference is that more and more of society needs such help in home, school and industry. Stresses must be relieved and programs developed to strengthen stability. This is apparent to public health workers who enter so many homes. In the health area best known to the reviewer, with a population of 60,000, 3,200 families were visited in a year. This shows the opportunities that the public health nurse has of working with such problems as this book outlines. The chapters on practical considerations in interviewing and counseling are pertinent for reorientation and should be read by every health worker. The non-directive type of interview is given prominence. "It is an accepted rule in counseling that merely offering advice to persons under emotional stress is seldom effective." Carl Rogers is quoted regarding his belief that each person has a right, in a democracy, to make his own decisions and secondly that the individual has an enormous capacity for adaption and readjustment. The importance of the counsellor is to act as a catalyst in realizing these capacities.

The importance of the home is stressed as a place where the individual feels he belongs. The home should establish self-confidence, habits of cooperation, and emotional and psycho-sexual maturity. The ideal mental development of the child is considered; guilt, hostility, withdrawal are enumerated as adverse factors. The reason for such factors as components of all our personalities and the part they play in both the disintegration and cohesion of our social organization is not discussed in the light of present anthropological knowledge. For example, the exploitation of children by parents is described as a factor in the development of psycho-neuroses. But the aspects of our particular society as distinct from other cultures, which create these exploiting parents, are never considered. In this regard the authors might have discussed the need for status in our social structure, the inconsistencies in our philosophy of life, the repressed guilt, the feelings of hostility, as forces which goad the parent in his or her behaviour. School is considered, as is the home, as another "laboratory in the technique of relationships." This brings forward the thought that public health workers might reconsider their policies

of reducing nursing time in schools. The present-day, intelligent, public health nurse might become a more integral part of the school for mental hygiene purposes.

Industry is seen as the setting in which the worker spends a goodly portion of his day. Examples are given of good mental hygiene programs in existence, such as the much-publicized "Hawthorne experiment," where non-directive counseling has been so effective.

In summary, this book is descriptive of the mental ills of our society and elaborates their development, if not the causative cultural factors suspected. The mobilization and the role of various workers in various settings, military, pastoral, industrial, medical, social work, is ably outlined and supplemented by a valuable bibliography.

J. M. Parker

Recent Advances in Public Health. By J. L. Burn, M.D., D.Hyg., D.P.H. London: J. & A. Churchill Ltd., 1947. 407 pages. Price not stated.

AS THE AUTHOR himself suggests, this volume covers "some aspects of some recent advances". It attempts to cover a vast field and, in the main, does it most competently. Naturally, the author refers principally to British experience and methods, with only moderate reference to procedures in other countries for purposes of comparison.

The book is divided into three parts: public health and the individual, public health and the community, public health and the environment. The greater part of the volume is devoted to the first two subjects, and environmental public health is given comparatively little space.

One cannot help but be impressed by the greater trend toward state services in Great Britain as contrasted to the United States and Canada. Nearly all aspects of public health for the individual and the community are provided by the "clinic" type of service, with little emphasis on the family physician. Certainly the physical facilities available seem to be excellent.

This volume has admirably reviewed the recent advances in public health in Great Britain and should serve as a useful reference for public health workers in Canada.

James M. Mather

